

Responsibility Centers, Transfer Pricing, Performance Measures, and Business Combinations

Responsibility Centers

A **responsibility center** is a segment of an organization (e.g., product line, geographical area, division) with defined accountability for financial and operational performance.

Types of Responsibility Centers

1. **Cost Centers:**
 - Responsible for controlling costs; revenue is immaterial.
 - Example: Manufacturing department focused on production costs.
2. **Revenue Centers:**
 - Responsible for generating revenue; expenses are not measured.
 - Example: Sales department focused on revenue targets.
3. **Profit Centers:**
 - Responsible for both generating revenue and controlling costs.
 - Example: A regional branch managing sales and expenses.
4. **Investment Centers:**
 - Responsible for revenue, costs, and return on invested capital.
 - Example: A division managing assets and profitability.

Evaluating Managers and Departments

- **Performance Evaluation:** Managers are assessed based on the metrics relevant to their responsibility center (e.g., cost control for cost centers, ROI for investment centers).
- **Allocation of Common Costs:** Shared costs (e.g., corporate overhead) must be allocated to responsibility centers for accurate performance evaluation.

Common Cost Allocation Methods

1. **Stand-Alone Cost Allocation:**
 - Allocates common costs proportionally based on each center's usage (e.g., revenue share, headcount).
 - Example: Allocate corporate rent based on each division's floor space.
2. **Incremental Cost Allocation:**
 - Assigns costs to one primary user first, then allocates remaining costs to others.
 - Example: Allocate IT costs to the largest department, then distribute residuals.
3. **Alternative Approach:**
 - Allocate a percentage of each department's contribution margin to cover common costs, avoiding direct cost allocation.

Contribution Income Statement

- **Definition:** A financial statement format that emphasizes contribution margin and segment performance for responsibility centers.
- **Structure:**
 - Revenues
 - Less: Variable Manufacturing Costs
 - **Manufacturing Contribution Margin**
 - Less: Variable Nonmanufacturing Costs (e.g., selling, administrative)
 - **Contribution Margin**
 - Less: Controllable Fixed Costs
 - **Controllable Margin** (measures short-term manager performance)
 - Less: Noncontrollable, Traceable Fixed Costs
 - **Segment Margin** (measures strategic business unit performance)
 - Less: Noncontrollable, Untraceable Common Costs
 - **Operating Income**

- **Example:**

Item	Company Total	Division 1	Division 2
Net Revenues	\$10,000	\$3,000	\$7,000
Variable Manufacturing Costs	3,900	900	3,000
Manufacturing Contribution Margin	6,100	2,100	4,000
Variable Nonmanufacturing Costs	600	100	500
Contribution Margin	5,500	2,000	3,500
Controllable Fixed Costs	1,250	500	750
Controllable Margin	4,250	1,500	2,750
Noncontrollable, Traceable Fixed Costs	2,000	600	1,400
Segment Margin	2,250	900	1,350
Noncontrollable, Untraceable Common Costs	1,000	-	-
Operating Income	\$1,250	-	-

Transfer Pricing

- **Definition:** The price charged by one organizational unit (e.g., division) to another within the same company for goods or services.
- **Goals:**
 - Promote **goal congruence** (align division objectives with company goals).
 - Encourage efficiency and fair performance evaluation.
 - Support accurate cost and revenue tracking.

Methods for Setting Transfer Prices

1. **Market Price:**
 - Uses the current market price for the product in an arm's-length transaction.
 - Suitable when an external market exists.
2. **Cost of Production + Opportunity Cost:**
 - Includes production costs plus the contribution margin forgone by selling internally.
3. **Variable Cost:**
 - Uses only the variable costs of the selling division.
 - Common when the selling division has excess capacity.
4. **Full Cost:**
 - Includes all production costs (materials, labor, overhead).
5. **Cost Plus:**
 - Adds a fixed amount or percentage to production costs.
6. **Negotiated Price:**
 - Agreed upon by the selling and buying divisions.
7. **Arbitrary Pricing:**
 - Set by top management for objectives like tax minimization.
8. **Dual-Rate Pricing:**
 - Selling and buying divisions record the transaction at different prices (e.g., selling at market price, buying at variable cost).

Transfer Pricing and Capacity

- **Excess Capacity:** Minimum transfer price = variable cost, as no opportunity cost is incurred.
- **Full Capacity:** Minimum transfer price = variable cost + opportunity cost (e.g., lost contribution margin from external sales).

Example: Blitz Corporation

- **Scenario:** Division B (at full capacity) produces widgets (\$15 market price, \$10 variable cost, \$3 fixed cost) and gadgets (\$30 market price, \$16 variable cost, \$8 fixed cost). Division A requests 1,000 widgets. The document's variable cost of \$10.30 seems erroneous; assume \$10 for simplicity.
- **Transfer Price:**
 - At full capacity, Division B forgoes external sales.
 - Minimum transfer price for widgets = Variable Cost + Opportunity Cost = (10 + (15 - 10)) = \$15).
 - Acceptable for:
 - Seller (Division B): Covers costs and lost contribution.
 - Buyer (Division A): Matches market price, ensuring fairness.
 - Company: Promotes goal congruence by reflecting true economic cost.

Performance Measures

Performance measures evaluate responsibility centers and motivate managers to achieve strategic and operational goals.

Performance Measurement Goals

- Align manager incentives with company objectives.
- Provide timely feedback to support decision-making.
- Balance financial and non-financial metrics.

Timing of Feedback

- Timely feedback is critical for corrective actions and motivation.
- Regular reporting (e.g., monthly variance reports) ensures responsiveness.

Performance Measurement Tools

1. **Return on Investment (ROI):**
 - Formula:
$$\text{ROI} = \frac{\text{Income of Business Unit}}{\text{Assets of Business Unit}}$$
 - **Benefits:**
 - Measures efficiency of asset utilization.
 - Comparable across divisions.
 - **Disadvantages:**
 - May discourage investments with lower ROI but positive value.
 - Sensitive to asset valuation methods.

2. Residual Income (RI):

- Formula:
$$\text{RI} = \text{Income} - (\text{Target Rate of Return} \times \text{Assets})$$
- Target Income:** Set by management as the desired return on assets.
- Benefits:**
 - Encourages investments that exceed the target return.
 - Aligns with long-term value creation.
- Limitations:**
 - Requires accurate target rate determination.
 - Less comparable across divisions with different asset bases.

3. Balanced Scorecard:

- Integrates multiple performance measures:
 - Financial Measures:** Revenue, profit, ROI.
 - Customer:** Satisfaction, retention, market share.
 - Internal Processes:** Efficiency, quality, cycle time.
 - Learning and Growth:** Employee skills, innovation.
- Links performance to **vision and strategy**, ensuring holistic evaluation.

Business Combinations and Consolidations: Example Problem

Problem

Scenario: On January 1, 2025, Parent Co. acquires 100% of Sub Co. for \$50,000,000 in cash to expand into the consumer electronics market. Sub Co.'s net assets have a fair value of \$42,000,000, including a patent valued at \$8,000,000 with a 10-year useful life. Sub Co. operates as a **profit center**, with two divisions: Division A (assembly) and Division B (sales). Division A transfers components to Division B at a negotiated transfer price. Budgeted data: 10,000 units, standard CM \$150/unit, actual data: 9,500 units sold, actual CM \$160/unit. Division A's variable cost is \$50/unit, market price \$100/unit, full capacity. Sub Co.'s assets are \$30,000,000, income \$2,000,000, target return 10%. Calculate goodwill, prepare the consolidation journal entry under US GAAP, compute sales variances and transfer price, calculate ROI and RI, and discuss how these tools support post-acquisition performance evaluation.

Solution:

1. Goodwill Calculation:

- Purchase price: \$50,000,000
- Fair value of net assets: \$42,000,000

- Goodwill = \$50,000,000 - \$42,000,000 = **\$8,000,000**

2. Consolidation Journal Entry (US GAAP):

- Dr Assets (excluding patent) 34,000,000
- Dr Patent 8,000,000
- Dr Goodwill 8,000,000
- Cr Cash 50,000,000

7. Amortization of Patent (Year 1, US GAAP):

- Annual amortization = \$8,000,000 ÷ 10 years = \$800,000
- Dr Amortization Expense 800,000
- Cr Accumulated Amortization 800,000

10. Sales Variance Analysis (Division B):

- Total Sales Variance:**
 - Actual Revenue = (9,500 × 160 = \$1,520,000)
 - Static Budget Revenue = (10,000 × 150 = \$1,500,000)
 - Total Variance = (1,520,000 - 1,500,000 = \$20,000 \text{ F})
- Sales Price Variance:**
 - ((160 - 150) × 9,500 = 10 × 9,500 = \$95,000 \text{ F})
- Sales Volume Variance:**
 - ((9,500 - 10,000) × 150 = -500 × 150 = -\$75,000 \text{ U})
- Verification:** Total Variance = Price Variance + Volume Variance = (95,000 - 75,000 = \$20,000 \text{ F})

11. Transfer Price (Division A to Division B):

- Division A at full capacity, market price = \$100, variable cost = \$50.
- Minimum transfer price = Variable Cost + Opportunity Cost = (50 + (100 - 50) = \$100).
- Negotiated Price:** \$100/unit ensures goal congruence, covering Division A's costs and lost external sales while aligning with Division B's market-based pricing.

12. Performance Measures:

- ROI:**
$$\text{ROI} = \frac{\text{Income}}{\text{Assets}} = \frac{2,000,000}{30,000,000} = 6.67\%$$

- **Residual Income:**
[
 $\text{RI} = 2,000,000 - (0.10 \times 30,000,000) = 2,000,000 - 3,000,000 = -\$1,000,000$
]

13. Strategic and Performance Notes:

- **Sales Variance Analysis:** The \$95,000 favorable price variance indicates successful pricing, but the \$75,000 unfavorable volume variance suggests demand issues, prompting marketing adjustments. This informs the **sales budget** for Sub Co.
- **Transfer Pricing:** The \$100 transfer price ensures fair cost allocation, supporting Division A's profitability and Division B's pricing strategy, aligning with the **profit center** structure.
- **Performance Measures:** The 6.67% ROI and negative RI (-\$1,000,000) indicate Sub Co. is below the target return, signaling a need for efficiency improvements or asset optimization.
- **Post-Acquisition Performance Evaluation:** Sales variances guide revenue strategies, transfer pricing ensures divisional alignment, and ROI/RI assess Sub Co.'s contribution to Parent Co.'s goals. These tools support the **master budget** and **control** processes.
- **Consolidation:** Eliminate Sub Co.'s equity accounts. Goodwill is tested annually for impairment, and the patent is amortized under US GAAP.
- **Strategic Alignment:** These tools ensure Sub Co.'s operations are efficient and profitable, supporting Parent Co.'s strategic objective of expansion in the consumer electronics market.